

University of Maine)	Departmental
Penobscot County)	Findings of Fact and Order
Orono, Maine)	Air Emission License
A-204-70-C-A)	Amendment #2

After review of the air emission license minor change application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A, Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Facility	University of Maine (UMaine)
License Number and Issued Amendments	A-204-70-A-I A-204-70-B-M
Current Amendment Type	Part 70 Minor Change
SIC Code(s)	8221
Nature of Business	Educational Facility
Date of License Issuance	November 6, 2000
Date of License Expiration	November 6, 2005
Date of Minor Change Issuance	January 11, 2002

This Part 70 Minor Change was submitted to allow Boiler #7 to fire natural gas, in addition to #6 oil.

B. Emission Equipment

The emission unit addressed in this Part 70 Minor Change is Boiler #7. Boiler #7 is an oil fired boiler rated at 73.6 MMBtu/hr and located at the Central Heating plant on the Orono campus.

C. Application Classification

A Part 70 Minor Change is for license changes that: do not violate any Applicable requirement and state requirement; do not involve a Part 70 Major Change to existing monitoring, reporting or recordkeeping requirements in the license; do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of

ambient impacts or a visibility or increment analyses; do not seek to establish or change a Part 70 license term or condition for which there is no corresponding underlying Applicable requirement, and that the source has assumed to avoid an Applicable requirement to which the source would otherwise be subject; are not a modification or reconstruction under Section 111 or 112 of the CAA, or a Title I Modification under the CAA; and are not required by the Department to be processed under Part 70 Major Change procedures.

This addition of natural gas to Boiler #7 is not a Part 70 Major Change or ‘modification’. The facility is not proposing substantial changes to existing monitoring and testing requirements, nor is it proposing the relaxation of existing license conditions (definition of Part 70 Major Change). The use of natural gas does not constitute a ‘modification’ because it does not result in the emission of a pollutant not previously emitted. The burner and its oil firing components will not be replaced or modified as part of the project and the heat input capacity of the boiler will not increase.

The facility’s request is classified as a Part 70 Minor Change and has been processed through Chapter 140 of the Department’s regulations.

II. MINOR CHANGE DESCRIPTION

UMaine has proposed to add natural gas firing capabilities to Boiler #7, in addition to the boiler’s oil firing capability. The project includes installing a gas train (piping, valves, gauges, etc.), a gas ring for introducing the gas fuel into the furnace, and tie-in of the natural gas fuel control valve into the existing combustion control system. The existing oil train and oil burner components will not be affected by this project.

The emission limits from firing natural gas in Boiler #7 were based on manufacturer data (CO and NO_x) and emissions data from similar sized boilers. The Best Practical Treatment (BPT) emission limits from firing natural gas in Boiler #7 are the following:

PM	0.01 lb/MMBtu
SO ₂	negligible
NO _x	0.20 lb/MMBtu
CO	11.0 lb/hr
VOC	0.74 lb/hr

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ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards, and
- will not violate applicable ambient air quality standards, or increment standards either alone or in conjunction with emissions from other sources.

Therefore the Department grants this amendment A-204-70-C-A, subject to the conditions found in air emission license A-204-70-A-I, in the subsequent amendment A-204-70-B-M, in addition to the following conditions:

The following shall replace condition (24) in air emission license A-204-70-A-I:

(24) Boilers #5, #6 and #7

- UMaine is licensed to operate boilers #5, #6 and #7 each with a maximum design heat input of 73.6 MMBtu/hr. [ME DEP, Chapter 140, BPT]
Enforceable by State-only
- UMaine is licensed to burn natural gas and fuel oil in Boiler #7. [ME DEP, Chapter 140, BPT]
- The sulfur content of the fuel oil fired in boilers #5, #6 and #7 shall not exceed 2.0% by weight demonstrated by purchase records from the supplier. [ME DEP, Chapter 106]
- Emissions from boilers #5, #6 and #7 shall each not exceed the following limits when burning fuel oil:

Pollutant	lb/MMBtu	Origin and Authority	Enforceability
PM	0.20	ME DEP, Chapter 103, Section 2(A)(1)	-
PM ₁₀	0.20	ME DEP, Chapter 140, BPT	Enforceable by State-only
NO _x (≤0.45% nitrogen)*	0.50	ME DEP, Chapter 138	-
NO _x (>0.45% nitrogen)*	0.55	ME DEP, Chapter 138	-

Pollutant	lb/hr	Origin and Authority	Enforceability
PM	14.7	ME DEP, Chapter 140, BPT	Enforceable by State-only
PM ₁₀	14.7	ME DEP, Chapter 140, BPT	Enforceable by State-only
SO ₂	154.6	ME DEP, Chapter 140, BPT	Enforceable by State-only
NO _x (≤0.45% nitrogen)*	36.8	ME DEP, Chapter 140, BPT	Enforceable by State-only
NO _x (>0.45% nitrogen)*	40.5	ME DEP, Chapter 140, BPT	Enforceable by State-only
CO	44.2	ME DEP, Chapter 140, BPT	Enforceable by State-only
VOC	7.4	ME DEP, Chapter 140, BPT	Enforceable by State-only

*: denotes the nitrogen content in the fuel

- E. Emissions from Boiler #7 shall not exceed the following limits when burning natural gas:

Pollutant	lb/MMBtu	Origin and Authority	Enforceability
PM	0.01	ME DEP, Chapter 140, BPT	Enforceable by State-only
PM	0.20	ME DEP, Chapter 103	-
NO _x	0.20	ME DEP, Chapter 140, BPT	Enforceable by State-only

Pollutant	lb/hr	Origin and Authority	Enforceability
PM	0.74	ME DEP, Chapter 140, BPT	Enforceable by State-only
PM ₁₀	0.74	ME DEP, Chapter 140, BPT	Enforceable by State-only
NO _x	14.7	ME DEP, Chapter 140, BPT	Enforceable by State-only
CO	11.0	ME DEP, Chapter 140, BPT	Enforceable by State-only
VOC	0.74	ME DEP, Chapter 140, BPT	Enforceable by State-only

- F. UMaine shall conduct annual tune-ups on boilers #5, #6 and #7 in accordance with Chapter 138, Section 3(L). [ME DEP, Chapter 138]
- G. Boilers #5, #6 and #7 shall not exceed a fuel oil use limit of 600,000 gallons during the period of May 1 through September 30 of any calendar year. [ME DEP, Chapter 138]
- H. Boilers #5, #6 and #7 shall be equipped with oxygen trim systems that shall be maintained and in operation when the units are in operation. Operation shall be automatic at higher steam production rates and manual when automatic mode does not reflect good engineering practice. [ME DEP, Chapter 140, BPT]

The following shall replace condition (35) in air emission license A-204-70-A-I:

(35) Recordkeeping

For all recordkeeping required by this license, the licensee shall maintain records of the most current six year period. [ME DEP, Chapter 140]

A. The following records shall be maintained for boilers #3 - #7:

1. Annual #6 fuel oil use indicating the quantity of fuel consumed (in gallons) based on delivery records and monthly tank inventories of fuel in and out of the single fuel oil storage tank (taken at the beginning and end of each month), the percent (%) sulfur content of the fuel by weight, and the nitrogen content of the fuel demonstrated by fuel analysis' from the supplier. Annual records shall be kept on a 12 month rolling total basis. [ME DEP, Chapter 138]
2. Record of annual tune-ups to include the following: [ME DEP, Chapter 138]
 - a. tune-up procedure file,
 - b. an oxygen/carbon monoxide curve or an oxygen/smoke curve,
 - c. verification of the optimum oxygen setting, and
 - d. proof that the fuel and air mixing have been improved if the minimum oxygen level is found to be substantially higher than the value provided by the manufacturer.

B. UMaine shall maintain records of the quantity of natural gas burned in Boiler #7 each calendar month and on a 12 month rolling total basis.

C. Annual #2 fuel oil use records indicating the quantity of fuel consumed campus wide (in gallons) based on purchase receipts, and the percent sulfur content of the fuel by weight demonstrated by fuel type. Annual records shall be kept on a monthly and 12 month rolling total basis.

D. For the class IV-A incinerator a log shall be maintained recording the weight of the waste charged, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight of waste charged shall be logged on the chart.

E. Records of all chemical usage in the printing services department, to include the amount used, the VOC content and the percentage HAP for each of the chemicals on an annual basis.

F. Records of solvent added to the solvent degreaser. [ME DEP, Chapter 130]

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G. UMaine shall maintain records of the monthly and annual throughput of gasoline at each dispensing station. [ME DEP, Chapter 118]

New Conditions:

(44) The term of this order shall be concurrent with the term of air emission license A-204-70-A-I.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2002.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: September 7, 2001

Date of application acceptance: September 17, 2001

Date filed with Board of Environmental Protection: _____

This order prepared by Kathleen E. Neil, Bureau of Air Quality.